COMPUTER USAGE COMPANY
CONFIDENTIAL EVALUATION

INPUT

ABOUT INPUT

THE COMPANY

INPUT provides planning information, analysis, and recommendations to managers and executives in the information processing industries. Through market research, technology forecasting, and competitive
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Prepared For:

Mr. Sam Wyly

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I INTRODUCTION

I INTRODUCTION

- This report was prepared as a custom study for Mr. Sam Wyly.

- The purpose of the report is to assess the strengths and weaknesses of Computer Usage Company (CUC).

- Telephone and on-site interviews, supplementing information from INPUT's files, were used to prepare this report.

- INPUT completed the following tasks in the course of performing this study:

  - Background research to determine the products offered and markets served by CUC.

  - An analysis of products competitive with CUC's product line.

  - A competitive analysis of CUC's products.

  - An assessment of the individual product life cycles of CUC products.

  - The market potential for existing CUC products, including a yearly forecast through 1985.

  - An assessment of CUC's financial performance compared to its prime competitors'.

  - A risk and capability evaluation of the CUC hardware suppliers.

  - An evaluation of and plan for improving product marketing literature.

  - A brief synopsis of the key management staff.

- INPUT will provide telephone support to Mr. Wyly to answer questions regarding this custom study.

II SUMMARY OF FINDINGS AND RECOMMENDATIONS

II SUMMARY OF FINDINGS AND RECOMMENDATIONS

- Computer Usage Company (CUC) provides computer services in two major markets.
    - Computer processing services (56% of revenue).
    - Turnkey systems (44% of revenue).
- Virtually all computer processing services are of a utility nature.
    - The end user is responsible for designing, programming, testing, enhancing, and executing the application.
    - CUC provides the computer resources to allow the user to develop, test, modify, and execute their applications.
- The turnkey systems offered by CUC are in two industries:
    - Banking (80% of turnkey revenue).
    - Agribusiness (20% of turnkey revenue).
- CUC is becoming more active in searching for new applications to add to the processing services product line.

  - A personnel management system is a recent product acquisition.

  - A new electronic mail service has been announced.

  - Agribusiness applications with characteristics similar to the turnkey systems are being considered.

- The major banking industry turnkey system addresses international finance.

  - The system handles letters of credit, acceptance, reimbursements, payments, and liability accounting.

  - A loan portfolio application will be added to this system in the near future.

- The banking turnkey system currently operates on a Qantel computer, but CUC plans to convert the software to a DEC environment.

- CUC has experienced major development problems in developing the banking turnkey systems. A development manager needs to be hired to control this situation.

- Market research was not used to develop product specifications or to assess market size. As a result, systems are technically oriented and appeal to very small market niches (100-400 sites in all of the U.S.).

- CUC must launch an aggressive campaign to add products to the processing services business.

  - The addition of agribusiness products would have a substantial positive impact on the processing services revenues and potentially on the turnkey system revenues as well.

- CUC has intense competition in processing services.

- Turnkey system competition is not as intense because of the specialization of CUC products that appeal to very small market niches.

- CUC's proprietary products are new on the product life cycle curve.

    - The banking turnkey system is still being developed, and will have new segments in development for at least five years.

    - The agribusiness turnkey systems are mature, but could become new if they were converted to run in a processing services mode.

- CUC needs to examine its software maintenance policies to ensure that costs are covered by the maintenance fees.

    - Software maintenance should be a required part of the sale.

    - A charge of 15% of the current purchase price of the system should be levied on all customers.

    - The software maintenance revenue stream should cover the actual technical resource costs incurred.

- CUC needs a growth-oriented chief executive rather than a caretaker. CUC has remained about the same size for the last five years while the industry has grown at least 20% per year.

- CUC needs product literature with a marketing orientation.

- CUC is in the process of converting all turnkey systems to operate in a DEC environment. This is an essential long-term strategy.

- CUC's financial performance is lackluster.

    - Revenue has remained essentially unchanged.

  - Profit has been almost nonexistant.

- CUC does not appear to have any long-term goals, strategies, or direction. The philosophy seems to be "more of the same."

- CUC has reduced its long-term debt position dramatically in the last several years. Long-term debt is almost completely retired.

- CUC has a weak cash position. This could lead to a cash squeeze in the near future.

- Receivable turnover is undermanaged. Collections average almost three months from invoice.

- CUC is well-positioned in its turnkey system markets. The banking and agribusiness markets are growing at 35% per year from a $110 million base in 1980.

- The remote computing market is growing at 21% per year and will represent a market over $9 billion by 1985.

- CUC needs an injection of growth-oriented top management to get the company moving.

  - The new management should focus on ways to lever turnkey systems and processing services together.

  - New application products should also be added to all of the product lines.

  - The company needs to be integrated into one unified organization.

- Market research should be conducted to determine market potentials prior to entering new markets.

- The new chief executive of CUC should institute a planning system to plan for growth and new markets.

III PRODUCT REVIEW

III PRODUCT REVIEW

A. PRODUCTS OFFERED AND MARKETS SERVED

- CUC offers two major types of computer services:
  - Processing services.
  - Turnkey systems.
- CUC's processing services have historically been sold as a utility service.
  - The user is expected to make use of the computer resources supplied by CUC and to create, execute, modify, and maintain their own application software.
- Utility computer services are very low margin because there are few if any significant differences between competitors. Competition is based on price rather than value.
- CUC's processing services business has not changed appreciably during the last five years.
  - Batch processing services are still available.

  - Interactive processing represents a growth opportunity for the company.

- CUC is in the process of identifying and acquiring license rights to proprietary application software that can be run on the network.

  - A personnel management system developed by Tesseract (San Francisco) was the first major proprietary application.

  - An electronic mail service has been announced, but details are not currently available on this new application.

- CUC has recently added APL to its network.

  - This is an application development tool (like COBOL, FORTRAN, PL/I, etc.) available on a number of networks.

  - The market for APL is small, but growing rapidly.

  - Many processing services vendors are adding APL to their software libraries.

- CUC offers WYLBUR, a remote job entry, job handling, and text editing system on the network.

  - WYLBUR is a replacement for IBM's TSO.

  - WYLBUR is a non-proprietary language used by several processing services firms.

  - WYLBUR is not a state-of-the-art system and, therefore, has many competitive disadvantages.

- Processing services account for over 55% of total CUC revenue. Turnkey systems represent the other 45% of revenue.

- CUC is currently developing proprietary application software in the agribusiness area to run in a remote computer environment.

  - This activity was undertaken to leverage the investment made in the turnkey systems.

  - Development problems exist on this project because the software is being converted from DEC assembly language to an IBM-compatible system.

  - Assuming that the development problems can be solved, the software could become a very valuable asset to CUC. The agribusiness sales force could sell both turnkey and processing solutions.

  - The net effect of creating the agribusiness processing service is to expand the prospect base by at least one order of magnitude over the current turnkey system base.

- CUC offers turnkey systems in two industries:

  - Banking and finance.

  - Agriculture.

- The banking and finance systems currently utilize Qantel hardware with application software developed by CUC.

  - One turnkey system is directed at funds movement and resultant cash flow implications.

  - The second turnkey system is targeted at international finance.

- New banking turnkey system products are planned for announcement every 1.5-2 years.

- CUC also offers turnkey systems targeted to the large feed lot, feed mill, and grain elevator operators.

    - The hardware used is a DEC PDP-11.

- The funds movement turnkey system is receiving much less attention than the international finance turnkey system.

- The international finance turnkey system handles the following:

    - Letters of credit.

    - Acceptances.

    - Reimbursements.

    - Payments.

    - Liability accounting.

- There will be a new international loan portfolio management system announced soon. This system will handle multiple currencies in the portfolio.

- New elements are planned for the international finance system. This system should continue to evolve for years to come.

- The international finance system will be converted to a DEC environment in the future. This will not be a simple conversion because the system was written in Qantel assembly language.

- Development problems have plagued the international finance system.

  - There were major losses on this system in 1979 and 1978.

  - Marketing of the system started in May of 1979.

- There was no market research performed to determine if a need existed for an international finance system.

  - Two salesmen thought up the idea in a bar after calling on Bankers Trust.

  - The salesmen eventually obtained an order for a customized solution in this field from Bankers Trust.

  - It took approximately two years to generalize the system sufficiently to market it to other financial institutions.

  - The system is beginning to gain acceptance in the financial community.

- The average selling price for the international finance turnkey system is between $700,000 and $1 million.

  - Additional add-on revenue is obtained as new software and hardware extensions are sold to the users.

- The agribusiness turnkey systems account for roughly 20% of total turnkey revenue, or about $1 million per year.

  - The revenue from these systems has remained flat for the last four years.

  - No growth is expected in this area.

- Sales costs for the agribusiness systems are almost prohibitive.

  - The prospects are geographically dispersed.

  - The sales cycle is long, generally over one year.

- New agribusiness products are planned, but none has been identified to date.

- CUC does not expect agribusiness turnkey systems to be a major part of their long-term growth plans.

- The three agribusiness turnkey systems perform the following functions:

  - Accounting for large grain elevator operators.

  - Formulation services for large feed mills.

  - Accounting for feed lot operators who maintain at least 20,000 head of cattle.

- The average agribusiness turnkey system is priced at $50,000. There is relatively little add-on software or hardware revenue from these systems.

- CUC expects to expand the prospect base in agribusiness by offering processing services to the operators of feed lots, feed mills, and grain elevators.

  - Some of the processing customers will eventually decide to obtain a computer system so that CUC will be well positioned to sell turnkey solutions to their processing services clients.

  - This strategy could have a highly positive impact on CUC's revenue and profit performance in the future.

B. COMPETITION

- CUC has a number of competitors in both remote computing services and turnkey systems, as shown in Exhibits III-1 and III-2.

- CUC's major remote computing competitors are:

  - Boeing Computer Services.

  - McAuto.

  - Optimum Systems.

  - Computone.

- There are relatively few points of difference between vendors of utility services. Competition is generally based on price and customer support.

- BCS and McAuto have large field support staffs. They can offer a higher level of customer support across the U.S. because of their size than can CUC.

- CUC doesn't stress customer support during the sales cycle.

  - CUC recognizes this weakness, but hasn't made the support investment required to build a long-term satisfied customer base.

  - Competitors can take advantage of the lack of customer support provided by CUC in competitive situations.

  - CUC is forced to compete strictly on a price basis. This has been a contributing reason for the historically poor profit performance of the utility division.

EXHIBIT III-1

COMPUTER USAGE COMPANY REMOTE COMPUTING COMPETITION

COMPANY	1979 INPUT ESTIMATE OF TOTAL U.S. AVAILABLE COMPANY REVENUE* ($ MILLION)	1979 INPUT ESTIMATE OF REMOTE COMPUTING REVENUE ($ MILLION)
AUTOMATIC DATA PROCESSING	$340M	$340M
BOEING COMPUTER SERVICES	100	70
COMPUTER SCIENCES	455	95
COMPUTONE	10	10
GENERAL ELECTRIC INFORMATION SERVICES	170	170
INFORMATICS	110	40
MCAUTO	150	150
NATIONAL CSS	100	100
OPTIMUM SYSTEMS	25	15
SERVICE BUREAU CORPORATION	150	120
SUN INFORMATION SERVICES	20	10
TYMSHARE	190	120
UNITED INFORMATION SYSTEMS	140	95
UNIVERSITY COMPUTING CO.	40	20

*U.S. ONLY, ROUNDED TO NEAREST $5 MILLION

EXHIBIT III-2

COMPUTER USAGE COMPANY TURNKEY SYSTEM COMPETITION

COMPANY	1979 INPUT ESTIMATE OF TOTAL U.S. AVAILABLE COMPANY COMPUTER SERVICES REVENUE ($ MILLION)*	1979 INPUT ESTIMATE OF TURNKEY SYSTEM REVENUE ($ MILLION)
AUTOMATIC DATA PROCESSING	$ 340M	$ 5M
ELECTRONIC DATA SYSTEMS	230	5
GENERAL ELECTRIC INFORMATION SERVICES	170	5
IBM	1,200	100
MONCHIK WEBER (NEW YORK)	10	5
NCR	100	25
SUN INFORMATION SERVICES	20	5
SYSTEMATICS	20	5
TMI SYSTEMS CORPORATION (CAMBRIDGE, MA)	10	5
TYMSHARE	190	10

*U.S. ONLY, ROUNDED TO NEAREST $5 MILLION

- CUC's prime competitors have developed proprietary application software. These companies, therefore, have a technical systems advantage because CUC is only just beginning to learn how to plan for, implement, service, and maintain this type of software.

- CUC's major banking turnkey system competitor is TMI Systems Corporation.

- Turnkey vendors have used the same strategy to obtain clients.

    - The vendor finds a bank (or banks) willing to fund the development of a system.

    - The system is tailored to the sponsoring bank (or banks).

    - The vendor retains marketing rights to the product and makes modifications as required to generalize the system for use by other banks.

- These systems have been marginally profitable to date.

    - Inadequate system specifications have been a problem.

    - The technical staff work outside of the turnkey systems organization structure. This has probably lead to the creation of technically superior systems, rather than systems needed or ordered by the customer. This organization costs CUC money.

    - Maintaining, enhancing, and converting assembly language systems is extremely expensive.

- The agribusiness turnkey systems cater to a relatively small market niche.

    - Processing services are the biggest competition.

  - A feedlot must be extremely large to justify the expense of a $50,000 turnkey system.
  - There are less than 400 prospects for these turnkey systems.

- The major agribusiness competitors are:
  - Computone.
  - IBM.
  - NCR.

- There are presently about 100 banks that are prospects for the international finance turnkey system. The prospect base will grow as CUC adds more segments to this system, but the total market size will utlimately remain very small.

C. PRODUCT LIFE CYCLE ANALYSIS

- The utility processing business is a mature delivery mode. Continued growth in this area will become increasingly difficult unless a higher level of customer support is provided.

- There is little risk of obsolescence of the tools provided on the utility network. The tools are obtained on a nonexclusive basis from vendors that support those products (for example, IBM). If a product became obsolete, CUC could obtain rights to a new product to replace the old.

- The banking turnkey systems are still in their infancy. In fact, development work on these systems will continue for the next several years as the applications are modified to appeal to a larger market segment.

- The agribusiness turnkey system for feed lots is approaching product maturity. Maintenance revenue is now a significant portion of total feed lot system revenue.

- There are potential new applications in the agribusiness area.

    - CUC should conduct market research into this area immediately.

    - CUC could become the dominant vendor in this industry, with a proper mix of new turnkey system products.

    - CUC could obtain additional leverage from these turnkey systems if the software could be used in a processing service mode. This is an area that should be explored in greater detail.

- There is a major opportunity to build an ongoing revenue base from turnkey systems.

    - All customers should be required to buy maintenance and support.

    - A charge of 15% of the current purchase price of the system should be levied for system enhancements, modifications, and maintenance.

    - The maintenance revenue stream should at least cover the cost of the technical resources required to develop and maintain the turnkey systems.

- There appears to be little emphasis on expanding the company. Revenue has been relatively constant for the last five years.

    - Six-month results for fiscal 1980, ending March 31, are encouraging, with revenues up over 20% from a year earlier. However, with the overall computer services industry growing at 25% per year, CUC results are not impressive.

D. PRODUCT LITERATURE EVALUATION

- CUC currently has very little published product literature. This is a short-term liability that needs to be corrected.

- CUC does not have a company brochure, aside from the annual report.

- Available product literature looks like it was created by a technician. It also appears to be several years old.

- The utility user's manual is extremely brief. It appears to be a cross between a brochure and a typical, detailed user's manual.

- This documentation weakness is common in small companies, but should have been corrected years ago at CUC. This is particularly true given that CUC has not instituted many significant changes in available network products during the last five years.

- There is no available product literature on the turnkey systems.

E. HARDWARE SUPPLIER ANALYSIS

- Qantel computers were originally used by CUC to sell a low-cost turnkey system.

- There is a risk in using Qantel computers. Will Qantel be a survivor when the shakeout hits the small computer manufacturers?

- DEC will retain its position as one of the largest suppliers of small computers to business.

- CUC is presently converting its Qantel-based systems to DEC hardware. This is a sound decision which will improve CUC's long-term market position.

- CUC must constantly watch for new hardware systems that offer superior price/performance to the current solutions.

  - Microcomputer technology has improved to the point where turnkey systems could be developed using a microcomputer.

IV FINANCIAL ANALYSIS

IV FINANCIAL ANALYSIS

- CUC's financial statistics are shown in Exhibit IV-1.
- Revenue has remained essentially flat for the last four years.
  - Profit has been virtually nonexistent at CUC since 1976.
- CUC has been into and out of several lines of business since 1975.
  - CUC got out of the facilities management business in 1977. It also got out of the professional services business in the same year.
  - CUC got into the processing services business in 1976. Losses were experienced in this business in 1976 and 1977, but profits now appear to be growing.
- The turnkey system business has been about a breakeven operation since its inception.
  - This reflects development problems on virtually all application systems.
  - High selling costs in agribusiness have hurt profits.
- Line of business revenue is depicted in Exhibit IV-2.

EXHIBIT IV-1

COMPUTER USAGE COMPANY FINANCIAL STATISTICS

FINANCIAL STATISTICS	1975	1976	1977	1978	1979
REVENUE*	$5.6	$9.1	$9.1	$9.9	$9.8
PROFIT BEFORE TAX*	0.7	(0.5)	(0.9)	0.3	0.2
REVENUE GROWTH	-	63%	-	9%	(1%)
PRE-TAX PROFIT MARGIN	13%	(5%)	(10%)	3%	2%

*$ MILLION

EXHIBIT IV-2

COMPUTER USAGE COMPANY LINE OF BUSINESS REVENUE

LINE OF BUSINESS	REVENUE ($ MILLION)					
	1974	1975	1976	1977	1978	1979
PROCESSING SERVICES	-	-	$3.8	$4.2	$4.5	$5.5
TURNKEY SYSTEMS	$0.8	$2.8	3.6	4.5	5.4	4.3
FACILITIES MANAGEMENT	3.0	2.6	1.6	0.4	-	-
PROFESSIONAL SERVICES	0.2	0.2	0.1	0.1	-	-

- Exhibit IV-3 shows selected balance sheet comparisons of CUC with overall industry averages of processing services companies in the same revenue class.

- CUC is working its way out of debt.

  - As of fiscal end of 1979, long-term debt was just under $1 million, down from $1.6 million the previous year.

  - In the most recent quarterly report, CUC indicated that long-term debt is now under $100,000.

- CUC could potentially get into a cash squeeze.

  - Receivables are clearly a problem as turnover is over 50% higher than the overall industry average for companies with the same revenue level.

  - Cash accounts for less than 2% of total assets.

- Improving the trade receivables to the industry average would bring in nearly $250,000 in cash.

- Overall industry averages by company type are shown in Appendix B, Exhibits B-3 and B-4.

- As of January 2, 1980, the only person known to own more than 5% of voting stock was Vic Bartoletti, President. Mr. Bartoletti beneficially owns 59,850 shares of common stock, or 7% of the outstanding shares. Of the 59,850 shares, 10,000 represent shares which are subject to unexercised stock options.

- All officers and directors, as of January 2, 1980, as a group beneficially owned 150,325 shares of common stock, or 17.3% of the outstanding shares. Twenty-seven thousand shares are included in the 150,325 which are subject to unexercised stock options.

EXHIBIT IV-3

COMPUTER USAGE COMPANY BALANCE SHEET COMPARISON WITH INDUSTRY AVERAGES

ITEM OR RATIOS	ALL PROCESSING SERVICES COMPANIES WITH REVENUES BETWEEN $2 AND $10 MILLION	CUC FISCAL 1979
SELECTED ASSETS		
TRADE RECEIVABLES AS A PERCENT OF TOTAL ASSETS	23%	31%
TOTAL CURRENT ASSETS AS A PERCENT OF TOTAL ASSETS	43%	39%
SELECTED LIABILITIES AND EQUITY		
CURRENT PORTION OF LONG-TERM DEBT AS A PERCENT OF TOTAL LIABILITIES	20%	34%
TOTAL CURRENT LIABILITIES AS A PERCENT OF TOTAL LIABILITIES	48%	75%
LONG-TERM DEBT LESS CURRENT PORTION AS A PERCENT OF TOTAL LIABILITIES	52%	25%
TOTAL STOCKHOLDERS EQUITY (NET WORTH) AS A PERCENT OF TOTAL ASSETS	43%	51%
FINANCIAL*		
CURRENT RATIO	1.9	1.0
AFTER-TAX RETURN ON EQUITY	35%	4%
TOTAL DEBT OVER TOTAL CAPITAL	0.6	0.4
LONG-TERM DEBT OVER NET WORTH	0.9	0.2
TRADE RECEIVABLES TURNOVER (DAYS)	55	84

*SEE APPENDIX A FOR DEFINITIONS

- Exhibit IV-4 shows selected financial statistics of public turnkey systems companies compared to CUC.

    - CUC's peformance is poor when compared to other successful companies in the turnkey system market.

EXHIBIT IV-4

SELECTED FINANCIAL STATISTICS OF PUBLIC TURNKEY SYSTEM COMPANIES COMPARED TO COMPUTER USAGE COMPANY

COMPANY	FINANCIAL STATISTICS	
	MOST RECENT THREE YEARS REVENUE GROWTH	AFTER-TAX PROFIT MARGIN
AUTO-TROL TECHNOLOGY CORP.	168%	10%
CADO SYSTEMS CORPORATION	533	13
COMSHARE	191	8
MANUFACTURING DATA SYSTEMS, INC.	91	10
MODULAR COMPUTER SYSTEMS	31	7
TRIAD SYSTEMS CORPORATION	322	11
OVERALL AVERAGE	112	9
CUC	8	2

V MARKET ASSESSMENT

V MARKET ASSESSMENT

- The overall market for computer services in the areas provided by CUC is growing at 17% from a $6 billion base in 1980, as shown in Exhibit V-1.
  - CUC has a miniscule 0.2% of the available market.
- The turnkey system market is extremely attractive for long-term growth.
- Virtually all remote computing types of service are rapidly growing markets, as shown in Exhibit V-2.
  - Most of CUC's current processing revenues are generated by the utility type of service.
  - The personnel system is considered a general business type of service.
  - The agribusiness processing software is an industry-specific type of service.
- Additional market forecast data is presented in Appendix C.

EXHIBIT V-1

COMPUTER SERVICES MARKET FORECAST FOR COMPUTER USAGE COMPANYS' MARKETS

REMOTE COMPUTING SERVICES	USER EXPENDITURES ($ MILLION)						AAGR 1980 - 1985
	1980	1981	1982	1983	1984	1985	
REMOTE COMPUTING SERVICES	$3,460	$4,190	$5,100	$6,160	$ 7,440	$ 9,020	21%
BATCH	2,510	2,730	2,950	3,170	3,430	3,740	8
TURNKEY SYSTEMS*	110	150	200	275	365	500	35
TOTAL	$6,080	$7,070	$8,250	$9,605	$11,235	$13,260	17%

*BANKING AND AGRICULTURE ONLY

EXHIBIT V-2

COMPUTER SERVICES MARKET FORECAST BY MODE AND TYPE OF SERVICE, 1980-1985

		USER EXPENDITURES ($ MILLION)							AAGR 1980-1985
		1979	1980	1981	1982	1983	1984	1985	
REMOTE COMPUTING SERVICES	GENERAL BUSINESS	$ 480	$ 580	$ 690	$ 840	$1,000	$ 1,190	$ 1,430	20%
	INDUSTRY SPECIALTY	1,610	1,980	2,410	2,950	3,610	4,410	5,380	22
	UTILITY	760	900	1,090	1,310	1,550	1,840	2,210	20
	SUBTOTAL	$2,850	$3,460	$4,190	$5,100	$6,160	$ 7,440	$ 9,020	21%
BATCH	GENERAL BUSINESS	$ 750	$ 840	$ 950	$1,060	$1,200	$ 1,360	$ 1,540	13%
	INDUSTRY SPECIALTY	1,150	1,290	1,390	1,490	1,570	1,660	1,790	8
	UTILITY	370	380	390	400	400	410	410	2
	SUBTOTAL	$2,270	$2,510	$2,730	$2,950	$3,170	$ 3,430	$ 3,740	8%
TURNKEY SYSTEMS	BANKING	$ 70	$ 90	$ 120	$ 160	$ 220	$ 290	$ 390	34%
	AGRI-CULTURE	15	20	30	40	55	75	110	40
	SUBTOTAL	$ 85	$ 110	$ 150	$ 200	$ 275	$ 365	$ 500	35%
GRAND TOTAL		$5,205	$6,080	$7,070	$8,250	$9,605	$11,235	$13,260	17%

VI MANAGEMENT PERSONNEL OVERVIEW

VI MANAGEMENT PERSONNEL OVERVIEW

- The following evaluations of key management staff are based upon recent interviews as well as observations of people who were involved in the negotiations preliminary to CUC's acquisition of its current Utility Division. The progress of the company has been monitored over the past four years through contacts with former and current customers and employees.

- In 1975, CUC was in a strong cash position and was in the process of moving its headquarters from Atlanta to San Francisco. The Singer Company was in the process of actively seeking to divest itself of its computer services business in Sunnyvale. Both Optimum Systems, Inc. and Boeing Computer Services had been actively engaged in evaluating a business plan Singer had for installing an early Amdahl computer. CUC became interested in investigating the acquisition shortly before Singer was scheduled to make a decision on the specific offers. The impression obtained of CUC management at that time was as follows:

  - There seemed to be substantial pressure for management to do something with the available cash, even though they were cautioned that they would not have time to do a careful analysis of the acquisition and/or the proposed business plan.

  - The result was the hurried acquisition of the physical facility, personnel, existing business, and general adoption of the business plan insofar as the installation of the Amdahl system was concerned. Unfortunately, the decision was made without a full understanding of the detailed implementation of the plan, and what was necessary to make the utility profitable. This resulted in the substantially increased revenues between 1975 and subsequent years, but also caused significant losses in both 1976 and 1977 (although the Utility Division was the major contributer to last year's profits).

  - The general management image projected in 1975 was one of impetuosity. An understanding of the distinction between a facilities management business and the more competitive nature of the commercial computer services industry was not in evidence.

- From a technical point of view, the operation of the Sunnyvale data center declined over time, especially in the systems support area. Customers concerned with support and service experienced a general decline in responsiveness on the part of data center personnel and service offering (although the vastly increased capacities of the Amdahl 470V6, which replaced an IBM 370/158, were able to delay the obvious impact until business increased through the acquisition of Greyhound).

- At the present time, there are three key personnel who seem to be running the business, and all were employees in 1975. They are: Vic Bartoletti, Hal Knight, and Fred Wozniak. The general impression seems to be the following:

  - Vic Bartoletti is popular with his employees and seems capable of inspiring a certain amount of confidence, but there are questions about the slow growth which has occurred. There are feelings that the Utilities Division could have expanded more rapidly on its early customer base if the emphasis had been on distributed data processing and enhanced systems support activities.

    - There is some question about the state of Bartoletti's health. He suffered a heart attack three years ago and reportedly is presently recovering from a second (about the end of April).

- Hal Knight is viewed as being exceptionally hard working, technically competent, very cost conscious and a bit of a dictator ("He just won't listen when his mind is made up."). However, employees admit he is effective both in running the operation and in sales situations. There is an indication that he gives preference in employment to members of his religion (Jehovah's Witness); but, even there, it has not been entirely negative ("I was trying to be critical of his hiring, but they are all really hardworking.").

- Fred Wozniak is not directly associated with the Utility Division and there is some feeling that he and Bartoletti, because of their close personal association, are inclined to run the overall business (including the Data Center) without enough consultation with the division management (Hal Knight).

    - Wozniak is responsible for sales of turnkey systems, both in agribusiness and banking. He has no technical development responsibilities.

    - He does not appear to be a growth-oriented manager and is satisfied with selling to very small markets.

- Jack Halcomb, who was recently appointed Vice President of Planning, was not highly regarded as an operations manager. The general attitude seemed to be that any move getting him away from operations had to be positive.

- For a period of time after CUC moved to the San Francisco area, Dr. Cuthbert Hurd was actively involved in some of the day-to-day management decisions and sales situations. (For example, he personally analyzed the Amdahl system before it was accepted, and made specific recommendations to the sales force on possible customers.) His involvement has diminished substantially over the past four years, and he has effectively disengaged himself from the business.

- Bill Sullivan is the district sales manager in New York. He is a long-time CUC employee and key to banking turnkey system sales in the Northeast. He appears to have an excellent understanding of the banking market.

- There is currently no technical development manager for turnkey systems. This position has been vacant for some time. This is a major liability that needs to be corrected. CUC has had a very poor historical performance in developing software.

- William Sloane, CUC's secretary, was not interviewed or evaluated in the course of this study.

- There is every indication that the business is somewhat stagnant, and the lack of any significant growth over the last four years, coupled with generally poor results, do not indicate management has found a winning combination in terms of product and service offerings. It nearly appears that the company is viewed as a means of making a living on the part of the management team.

APPENDIX A: DEFINITIONS

APPENDIX A: DEFINITIONS

COMPUTER SERVICES

- These are services provided by vendors which perform data processing functions using vendor computers (processing services), or assist users to perform such functions on their own computers (software products and/or professional services).

- The following are definitions of the modes of service used in this report:

  - Remote Computing Services. Provision of data processing to a user by means of terminals at the user's site(s) connected by a data communications network to the vendor's central computer. The three submodes of RCS are:

    - Interactive (timesharing), characterized by interaction of the user with the system, primarily for problem solving timesharing but also for data entry and transaction processing. The user is on-line to the program/files.

    - Remote Batch, where the user hands over control of a job to the vendor's computer which schedules job execution according to priorities and resource requirements.

    - Data Base inquiry, characterized by the retrieval of information from a vendor-maintained data base. This may be owned by the vendor or a third party.

    - User Site Hardware Services (USHS). These are offerings, typically provided by RCS vendors, which place programmable hardware on the user site (as compared to the EDP center). USHS offers:

        - Access to a communications network.

        - Access through the network to the RCS vendor's larger computers.

        - Significant software as part of the service.

- Batch Services. This includes data processing performed at vendor's sites of user programs and/or data which are physically transported (as opposed to electronically, by telecommunications media) to and/or from those sites. Data entry and data output services, such as keypunching and COM processing, are also included. Batch services include those expenditures by users which take their data to a vendor site which has a terminal connected to a remote computer used for the actual processing.

- Facilities Management (FM). (Also referred to as "Resource Management" or "Systems Management.") The management of all or part of a user's data processing functions under a long-term contract (not less than one year). To qualify as FM, the contractor must directly plan and control, as well as operate, the facility provided to the user on-site through communications lines or mixed mode. Simply providing resources, even though under a long-term contract, and/or providing for all of a users' processing needs, does not necessarily qualify as FM.

- Turnkey System. A combination of hardware and software integrated into a total system designed to fulfill completely the processing require-ments of an application (or applications) for a user.

PROCESSING SERVICES

- Processing services encompass facilities management, remote computing services, and batch services. They are categorized by type of services bought by users as follows:

  - General Business services are processing services for applications which are common to users across industry categories. Software is provided by the vendor; this can be a complete package, a payroll package, or an applications "tool," such as a budgeting model, where a user provides much of the customizing of the finished product it uses. General business processing is often repetitive and transaction-oriented.

  - Scientific and Engineering services are the processing of scientific and engineering problems for users across industries. The problems usually involve the solution of mathematical equations. Processing is generally problem solving and is non-repetitive, except in the sense that the same packages or "tools" are used to address different, but similar, problems.

  - Industry Specialty services provide processing for particular functions or problems unique to an industry or industry group. The software is provided by the vendor either as a complete package or as an applications "tool" which the user employs to produce a unique solution. Specialty applications can be either business or scientific in orientation; data base services, where the vendor supplies the data base and controls access to it (although it may be owned by a third party), are also included under this category. Examples of industry specialty applications are: seismic data processing, numerically-controlled machine tool software development, and demand deposit accounting.

- Utility services are those where the vendor provides access to a computer and/or communications network with basic software that enables any user to develop its own problem solution or processing system. These basic tools include terminal handling software, sorts, language compilers, data base management systems, information retrieval software, scientific library routines, and other systems software.

PROFESSIONAL SERVICES

- This category is made up of services related to EDP, including system design, custom/contract programming, consulting, education, and training. Services are provided on the basis of:
    - Time and Materials - The billing rate is measured in units of time, rather than actual costs.
    - Fixed Price - A firm price is agreed upon for a defined piece of work.
    - Cost Plus Fee - The billing rate depends on actual costs plus a fixed fee.

SOFTWARE PRODUCTS

- This category includes user's purchase of applications and systems packages for use on in-house computer systems. Included are lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package at the users' site(s). Fees for work performed by organizations other than the package vendor are counted in professional services. There are two major subcategories of software products:

- Application Products are software which perform processing to serve user functions. They consist of:
  - Cross-industry products which are used in multiple user industry sectors. Examples are payroll, inventory control, and financial planning.
  - Industry specialized products which are used in a specific industry sector such as banking and finance, transportation, or discrete manufacturing. Examples are demand deposit accounting and airline scheduling.
- System Products are software that enable the computer/communications system to perform basic functions. They consist of:
  - System operations products which function during applications program execution to manage the computer system resource. Examples include operating systems, DBMS, communication monitors, emulators, and spoolers.
  - System utilization products which are used by operations personnel to utilize the computer system more effectively. Examples include performance measurement, job accounting, computer operations scheduling, and utilities.
  - System implementation products which are used to prepare applications for execution by assisting in designing, programming, testing, and related functions. Examples include

languages, sorts, productivity aids, data dictionaries, report writers, project control systems, program library management systems, and retrieval systems.

- All expenditures and revenues addressed are "available" in that they are open for competition. "Captive" figures, which refer to expenditures by a user for services from a subsidiary company, such as Boeing Aircraft with Boeing Computer Services (BCS), are not included. They may be referred to when examining an individual "spin-off" vendor, such as BCS.

- When any questions arise as to the place to count certain user expenditures, INPUT addresses the questions from the user's viewpoint and categorizes the expenditures according to the answer to the question "What does the user perceive it is buying?"

FINANCIAL TERM DEFINITIONS

- Current Ratio: Current assets/current liabilities.

- After-Tax Return On Equity: Net income after tax/total equity.

- Total Debt Over Total Capital: $\dfrac{\text{Total debt (including current portion)}}{\text{Total debt (including current portion) + total equity}}$

- Long-Term Debt Over Net Worth: Long-term debt/total equity.

- Trade Receivables Turnover (Days):

$$30*\left(\frac{\text{Trade Receivables}}{\left(\frac{\text{Annual Revenue}}{12}\right) \quad * \quad 1+\left(\frac{\text{Revenue Growth Rate}}{2}\right)}\right)$$

Pre-Tax Profit Margin: Pre-tax income/revenue.

APPENDIX B: OVERALL INDUSTRY AVERAGES OF FINANCIAL STATISTICS

EXHIBIT B-1

COMPUTER SERVICES COMPANIES' ACTUAL GROWTH AND FORECASTS OF TOTAL AVAILABLE U.S. REVENUES

TYPE OF COMPANY	RESPONDENTS TO SURVEY			
	FORECAST 1977 TO 1978	ACTUAL* 1977 TO 1978	FORECAST 1978 TO 1979	FORECAST FOR NEXT 5 YEARS
PROCESSING SERVICES	22%	22%	19%	21%
SOFTWARE PRODUCTS	48	38	37	32
PROFESSIONAL SERVICES	31	25	32	27
WEIGHTED AVERAGE, ALL COMPANIES	22%	23%	22%	23%

*ACTUAL REPORTED GROWTH INCLUDES SOURCES OTHER THAN INCREMENTAL U.S. AVAILABLE REVENUES, PARTICULARLY ACQUISITIONS. THEREFORE, THIS GROWTH RATE IS OVERSTATED WHEN COMPARED TO THE ACTUAL 1977 TO 1978 GROWTH ESTIMATED TO HAVE BEEN 19% FOR THE TOTAL INDUSTRY

EXHIBIT B-2

COMPUTER SERVICES COMPANIES' WEIGHTED AVERAGE PROFITS BEFORE TAXES AS A PERCENT OF 1978 TOTAL REVENUES

TYPE OF COMPANY \ PROFITABILITY	SIZE IN TOTAL 1978 ANNUAL REVENUES			WEIGHTED AVERAGE
	LESS THAN $2M	$2-10M	GREATER THAN $10M	
PROCESSING SERVICES	11%	13%	14%(1)	13%
SOFTWARE PRODUCTS	12	11	10	11
PROFESSIONAL SERVICES	6	8	5	6
WEIGHTED AVERAGE	11%	12%	11%	11%

(1) PROCESSING SERVICES COMPANIES IN THIS CATEGORY REPORTED PROFITS ARE AS FOLLOWS:

COMPANIES WITH REVENUES OF $10-25 MILLION, 11%
COMPANIES WITH REVENUES OVER $25 MILLION, 14%

EXHIBIT B-3

COMPARISON OF BALANCE SHEET ITEMS FROM PROCESSING SERVICES, SOFTWARE PRODUCTS, AND PROFESSIONAL SERVICES COMPANIES

CATEGORY OF COMPANY ITEM OR RATIO	1978 FISCAL YEAR DATA			
	PROCESSING SERVICES	SOFTWARE PRODUCTS	PROFESSIONAL SERVICES	TOTAL
SELECTED ASSETS				
TRADE RECEIVABLES AS A PERCENT OF TOTAL ASSETS	16%	51%	48%	20%
TOTAL CURRENT ASSETS AS A PERCENT OF TOTAL ASSETS	32	77	69	33
SELECTED LIABILITIES				
CURRENT PORTION OF LONG-TERM DEPT AS A PERCENT OF TOTAL LIABILITIES	4	10	5	5
TOTAL CURRENT LIABILITIES AS A PERCENT OF TOTAL LIABILITIES	25	79	53	33
LONG-TERM DEBT LESS CURRENT PORTION AS A PERCENT OF TOTAL LIABILITIES	20	21	47	25
TOTAL STOCKHOLDERS EQUITY (NET WORTH) AS A PERCENT OF TOTAL ASSETS	35	45	32	34
FINANCIAL*				
CURRENT RATIO	2.4	4.6	3.3	2.9
AFTER-TAX RETURN ON EQUITY	30%	64%	34%	37%
TOTAL DEBT AS A PERCENT OF TOTAL CAPITAL	45%	24%	37%	42%
LONG-TERM DEBT AS A PERCENT OF NET WORTH	81%	67%	49%	7%
TRADE RECEIVABLES TURNOVER, (DAYS)	56	73	69	66

*SEE APPENDIX A FOR DEFINITIONS

EXHIBIT B-4

BALANCE SHEET DATA - COMPARISON BY SIZE OF PROCESSING SERVICES COMPANY

ITEM OR RATIO / SIZE OF COMPANY	1978 FISCAL YEAR DATA				OVERALL AVERAGE
	$2M	$2-10M	$10-25M	$25M	
SELECTED ASSETS					
TRADE RECEIVABLES AS A PERCENT OF TOTAL ASSETS	27%	23%	24%	16%	16%
TOTAL CURRENT ASSETS AS A PERCENT OF TOTAL ASSETS	50	43	41	30	32
SELECTED LIABILITIES					
CURRENT PORTION OF LONG-TERM DEBT AS A PERCENT OF TOTAL LIABILITIES	15	20	15	3	4
TOTAL CURRENT LIABILITIES AS A PERCENT OF TOTAL LIABILITIES	42	48	40	28	28
LONG-TERM DEBT LESS CURRENT PORTION AS A PERCENT OF TOTAL LIABILITIES	58	52	54	15	20
TOTAL STOCKHOLDERS EQUITY (NET WORTH) AS A PERCENT OF ASSETS	50	43	49	34	35
FINANCIAL*					
CURRENT RATIO	3.2	1.9	2.2	1.6	2.4
RETURN ON EQUITY	41%	35%	22%	22%	30%
TOTAL DEBT OVER TOTAL CAPITAL	0.5	0.6	0.4	0.2	0.45
LONG TERM DEBT OVER NET WORTH	1.3	0.9	0.5	0.3	0.81
TRADE RECEIVABLES TURNOVER (DAYS)	45	55	61	65	56

*SEE APPENDIX A FOR DEFINITIONS

EXHIBIT B-5

COMPARISON OF EXPENDITURE PATTERNS BETWEEN TYPES OF COMPANIES

CATEGORY OF EXPENDITURES	PERCENT OF TOTAL FISCAL 1978 EXPENDITURES			
	PROCESSING	SOFTWARE PRODUCTS	PROFESSIONAL SERVICES	TOTAL INDUSTRY
MARKETING	8%	9%	2%	7%
SALES	19	37	7	19
RESEARCH AND PRODUCT DEVELOPMENT	6	21	4	7
OPERATIONS A. PERSONNEL EXCLUDING THOSE WORKING ON FIXED PRICE CONTRACTS	21	6	23	20
B. PERSONNEL WORKING ON FIXED PRICE CONTRACTS	1	-	6	2
C. COMPUTER SYSTEM EQUIPMENT AND MAINTENANCE	17	3	9	16
D. DATA COMMUNICATIONS	6	-	1	5
E. FACILITY OPERATIONS	5	2	5	5
PAYMENT TO THIRD PARTIES FOR SFW ROYALTIES	2	4	1	2
GENERAL ADMINISTRATIVE	10	18	12	10
ALL OTHER	5	-	30	7
TOTAL	100%	100%	100%	100%

EXHIIBT B-6

EXPENDITURE DISTRIBUTION - COMPARISON BY SIZE OF PROCESSING SERVICES COMPANY

CATEGORY OF EXPENDITURE / SIZE OF COMPANY	PERCENT OF TOTAL 1978 EXPENDITURES			
	<$2M	$2-10M	$10-25M	>$25M
MARKETING	3%	4%	9%	8%
SALES	5	7	14	22
RESEARCH AND PRODUCT DEVELOPMENT	5	5	5	7
OPERATIONS				
a. PERSONNEL EXCLUDING THOSE WORKING ON FIXED PRICE CONTRACTS	31	27	16	21
b. PERSONNEL WORKING ON FIXED PRICE CONTRACTS	6	5	1	-
c. COMPUTER SYSTEM EQUIPMENT AND MAINTENANCE	21	22	22	17
d. DATA COMMUNICATIONS	2	2	7	6
e. FACILITY OPERATIONS	6	6	5	5
PAYMENTS TO THIRD PARTIES FOR SOFTWARE ROYALTIES	1	1	2	-
GENERAL ADMINISTRATIVE	15	16	20	8
ALL OTHER	6	5	1	5
TOTAL*	100%	100%	100%	100%

*MAY NOT ADD UP TO 100% BECAUSE OF ROUNDING

EXHIBIT B-7

PUBLISHED RESULTS OF PUBLIC COMPUTER SERVICES COMPANIES

COMPANY NAME	FISCAL YEAR END		1978	1977	% GROWTH 1977-1978	% PROFIT ON REVENUES	
			($ MILLION)			1977	1978
ANACOMP	6/30	R P	$ 21.62 3.18	$ 16.18 2.45	34% 30	15%	15%
APPLIED DATA RESEARCH	12/31	R P	22.63 1.97	16.93 3.03	34 <54>	18	9
ADP	6/30	R P	299.26 54.03	245.49 45.97	22 18	19	18
BRADFORD NATIONAL	12/31	R P	118.74 7.4	94.02 5.74	26 29	6	6
COMNET	3/31	R P	16.60 1.80	7.30 0.80	127 25	11	11
CARS	12/31	R P	20.20 1.50	16.50 1.50	22 0	9	7
COMPUSERV	12/31	R P	15.84 1.37	14.33 1.66	11 <21>	12	9
COMPUTER SCIENCES CORP.	3/31	R P	276.90 26.10	234.70 21.20	18 23	9	9
COMSHARE	6/30	R P	25.64 3.76	18.21 2.27	41 66	12	13
ELECTRONIC DATA SYSTEMS	6/30	R P	217.84 32.47	164.19 28.51	33 14	17	15

R = REVENUES (GROSS)
P = PROFITS (BEFORE TAXES & EXTRAORDINARY ITEMS)

EXHIBIT B-7 (CONT.)

PUBLISHED RESULTS OF PUBLIC COMPUTER SERVICES COMPANIES

COMPANY NAME	FISCAL YEAR END		1978 ($ MILLION)	1977 ($ MILLION)	% GROWTH 1977-1978	% PROFIT ON REVENUES 1977	% PROFIT ON REVENUES 1978
KEYDATA	6/30	R	$ 15.07	$ 14.56	4%		
		P	<.31>	.38	N.A.	3%	<2%>
MDSI	8/31	R	28.80	22.20	30		
		P	6.30	5.00	26	23	22
MATHEMATICA	6/30	R	26.50	22.70	17		
		P	0.45	1.36	<67>	6	2
NATIONAL CSS	2/28	R	48.89	41.70	17		
		P	7.49	5.48	37	13	15
NATIONAL DATA CORPORATION	5/31	R	35.80	30.70	17		
		P	4.97	4.16	19	14	14
ON-LINE SYSTEMS	4/30	R	22.62	16.00	41		
		P	2.92	2.27	29	14	13
QUOTRON	12/31	R	39.38	33.35	18		
		P	6.51	5.31	23	23	17
RAND INFORMATION SYSTEMS	2/25	R	11.67	7.59	54		
		P	1.10	0.78	41	10	9
RAPIDATA	12/31	R	19.11	17.91	7		
		P	2.52	1.84	37	10	13
SHARED MEDICAL	12/31	R	63.05	45.69	38		
		P	18.03	13.27	36	29	29

R = REVENUES (GROSS)
P = PROFITS (BEFORE TAXES & EXTRAORDINARY ITEMS)

EXHIBIT B-7 (CONT.)

PUBLISHED RESULTS OF PUBLIC COMPUTER SERVICES COMPANIES

COMPANY NAME	FISCAL YEAR END		1978 ($ MILLION)	1977 ($ MILLION)	% GROWTH 1977-1978	% PROFIT ON REVENUES 1977	% PROFIT ON REVENUES 1978
SYSTEMS DEVELOPMENT CORPORATION	6/30	R P	$145.04 4.51	$130.09 4.86	11% <8>	4%	3%
TYMSHARE	12/31	R P	149.56 19.39	101.17 15.81	48 23	16	13
TOTAL	-	R P	1,640.76 207.46	1,311.51 173.65	25* 19*	13*	13*

R = REVENUES (GROSS)
P = PROFITS (BEFORE TAXES & EXTRAORDINARY ITEMS)

*WEIGHTED AVERAGES

APPENDIX C: COMPUTER SERVICES MARKET FORECAST

EXHIBIT C-1

COMPUTER SERVICES MARKET FORECAST BY MODE AND TYPE OF SERVICE - TOTAL, 1979-1984*

COMPUTER SERVICE		USER EXPENDITURES								
MODE	TYPE	1978 ($M)	1979 ($M)	GROWTH 1978-1979 (%)	1980 ($M)	1981 ($M)	1982 ($M)	1983 ($M)	1984 ($M)	AAGR 1979-1984 (%)
REMOTE COMPUTING SERVICES	GEN. BUS.	$ 390	$ 480	21%	$ 580	$ 690	$ 840	$ 1,000	$ 1,190	20%
	SCI. & ENG.	300	340	13	390	460	540	630	730	16
	IND. SPEC.	1,320	1,610	22	1,980	2,410	2,950	3,610	4,410	22
	UTILITY	640	760	18	900	1,090	1,310	1,550	1,840	20
SUBTOTAL		2,650	3,190	20	3,850	4,650	5,640	6,790	8,170	21
FACILITIES MANAGEMENT	GEN. BUS.	–	–	–	–	–	–	–	–	–
	SCI. & ENG.	100	110	6	120	130	140	150	160	8
	IND. SPEC.	840	960	15	1,110	1,270	1,470	1,680	1,920	15
	UTILITY	210	250	18	280	330	390	450	520	16
SUBTOTAL		1,150	1,320	15	1,510	1,730	2,000	2,280	2,600	15
BATCH	GEN. BUS.	690	750	9	840	950	1,060	1,200	1,360	13
	SCI. & ENG.	90	100	3	100	100	100	100	100	0
	IND. SPEC.	1,060	1,150	9	1,290	1,390	1,490	1,570	1,660	8
	UTILITY	350	370	7	380	390	400	400	410	2
SUBTOTAL		2,190	2,370	9	2,610	2,830	3,050	3,270	3,530	8
TOTAL PROCESSING	GEN. BUS.	1,080	1,230	13	1,420	1,640	1,900	2,200	2,550	16
	SCI. & ENG.	490	550	10	610	690	780	880	990	13
	IND. SPEC.	3,220	3,720	16	4,380	5,070	5,910	6,860	7,990	16
	UTILITY	1,200	1,380	15	1,560	1,810	2,100	2,400	2,770	15
TOTAL		$ 5,990	$ 6,880	15%	$7,970	$9,210	$10,690	$12,340	$14,300	16%
SOFTWARE PRODUCTS	SYSTEM	$ 760	$ 980	29%	$1,280	$1,680	$ 2,210	$ 2,950	$ 3,950	32%
	APPLICATION	590	720	23	890	1,100	1,370	1,720	2,160	24
TOTAL		$ 1,350	$ 1,700	26%	$2,170	$2,780	$ 3,580	$ 4,670	$ 6,110	29%
PROFESSIONAL SERVICES		1,370	1,620	18	1,920	2,270	2,700	3,200	3,800	19
GRAND TOTAL		$ 8,710	$10,200	17%	$12,060	$14,260	$16,970	$20,210	$24,210	19%

* USER EXPENDITURES ARE ROUNDED TO NEAREST TEN MILLION DOLLARS

EXHIBIT C-2

UTILITY PROCESSING SERVICES - MARKET FORECAST BY INDUSTRY SECTOR, 1979-1984

	MARKET FORECAST BY INDUSTRY SECTOR, 1979-1984								
INDUSTRY SECTOR	1978 ($M)	1979 ($M)	GROWTH 1978-1979 (%)	1980 ($M)	1981 ($M)	1982 ($M)	1983 ($M)	1984 ($M)	AAGR 1979-1984 (%)
DISCRETE MANUFACTURING	$ 140	$ 159	14%	$ 181	$ 207	$ 233	$ 264	$ 303	14%
PROCESS MANUFACTURING	119	136	14	150	163	194	222	252	13
TRANSPORTATION	29	34	17	39	44	49	54	59	12
UTILITIES	94	107	14	119	132	145	157	170	10
BANKING AND FINANCE	46	51	13	58	65	73	82	95	13
INSURANCE	27	30	11	32	35	39	42	46	11
MEDICAL	12	14	17	15	17	19	21	24	11
EDUCATION	24	27	11	29	31	32	33	34	5
RETAIL	50	56	12	62	68	77	86	98	12
WHOLESALE	101	112	11	120	129	136	143	150	6
FEDERAL GOVERNMENT	362	427	18	503	608	730	880	1,050	20
STATE & LOCAL GOVERNMENT	78	86	10	97	117	137	156	177	16
SERVICES	49	59	20	71	86	103	121	143	19
OTHER	65	76	17	89	105	122	143	166	17
TOTAL	$1,196	$1,374	15%	$1,565	$1,807	$2,089	$2,404	$2,767	15%

EXHIBIT C-3

COMPUTER SERVICES MARKET FORECAST - BANKING AND FINANCE SECTOR, 1979-1984

COMPUTER SERVICE		USER EXPENDITURES								
MODE	TYPE	1978 ($M)	1979 ($M)	GROWTH 1978-1979 (%)	1980 ($M)	1981 ($M)	1982 ($M)	1983 ($M)	1984 ($M)	AAGR 1979-1984 (%)
REMOTE COMPUTING SERVICES	GEN. BUS.	$ 85	$ 105	24%	$ 128	$ 155	$ 185	$ 223	$ 266	21%
	SCI. & ENG.	-	-	-	-	-	-	-	-	-
	IND. SPEC.	439	540	23	665	821	1,005	1,228	1,501	23
	UTILITY	39	44	13	50	56	63	71	82	13
SUBTOTAL		563	689	22	843	1,032	1,253	1,522	1,849	22
FACILITIES MANAGE-MENT	GEN. BUS.	-	-	-	-	-	-	-	-	-
	SCI. & ENG.	-	-	-	-	-	-	-	-	-
	IND. SPEC.	197	233	18	274	321	376	439	512	17
	UTILITY	-	-	-	-	-	-	-	-	-
SUBTOTAL		197	233	18	274	321	376	439	512	17
BATCH	GEN. BUS.	121	134	11	146	160	174	190	206	9
	SCI. & ENG.	-	-	-	-	-	-	-	-	-
	IND. SPEC.	432	468	8	507	542	581	619	656	7
	UTILITY	7	7	7	8	9	10	11	13	11
SUBTOTAL		560	609	9	661	711	765	820	875	8
TOTAL PROCES-SING	GEN. BUS.	206	239	15	274	315	359	413	472	15
	SCI. & ENG.	-	-	-	-	-	-	-	-	-
	IND. SPEC.	1,068	1,241	16	1,446	1,684	1,962	2,286	2,669	16
	UTILITY	46	51	13	58	65	73	82	95	13
TOTAL		$1,320	$ 1,531	16%	$1,778	$2,064	$2,394	$2,781	$3,236	16%
SOFTWARE PRODUCTS	SYSTEM	$ 55	$ 62	13%	$ 70	$ 80	$ 91	$ 104	$ 118	14%
	APPLI-CATION	161	187	16	214	245	279	318	361	14
TOTAL		$ 216	$ 249	15%	$ 284	$ 325	$ 370	$ 422	$ 479	14%
PROFESSIONAL SERVICES		108	127	18	146	168	193	222	254	15
GRAND TOTAL		$1,644	$ 1,907	16%	$2,208	$2,557	$2,957	$3,425	$3,969	16%

EXHIBIT C-4

COMPUTER SERVICES MARKET FORECAST FOR BANKING AND FINANCE BY INDUSTRY SUBSECTOR
1978-1984

INDUSTRY SUBSECTOR	USER EXPENDITURES								
	1978 ($ MILLION)	1979 ($ MILLION)	GROWTH 1978/1977 (PERCENT)	1980 ($ MILLION)	1981 ($ MILLION)	1982 ($ MILLION)	1983 ($ MILLION)	1984 ($ MILLION)	AAGR 1979-1984 (PERCENT)
COMMERCIAL BANKING	$ 1,033	$ 1,210	17%	$ 1,411	$ 1,646	$ 1,918	$ 2,236	$ 2,603	17%
SAVINGS AND LOAN	158	182	15	209	239	274	314	362	15
CREDIT UNION	77	91	18	107	126	148	174	205	18
FINANCE COMPANY	53	59	12	67	75	84	94	107	12
SECURITY AND COMMODITY BROKERS	225	252	12	283	318	355	400	450	12
MORTGAGE BANKING COMPANY	22	25	17	29	35	41	48	57	17
OTHER	76	88	16	102	118	137	159	185	16
TOTAL	$ 1,644	$ 1,907	16%	$ 2,208	$ 2,557	$ 2,957	$ 3,425	$ 3,969	16%

APPENDIX D: COMPANY HIGHLIGHT

COMPANY HIGHLIGHT

COMPUTER USAGE COMPANY
141 Battery Street
San Francisco, CA 94111
(415) 543-3940

President: Victor E. Bartoletti
Public Corporation OTC
Total Employees: 175
Total Revenues, Fiscal Year End
9/30/78: $9,929,201

THE COMPANY

- Computer Usage Company (CUC) was founded in 1955 as a Delaware corporation to provide application and systems software, and contract programming. CUC now provides general remote computing services and turnkey systems to the banking and agricultural industries.

- Company revenues increased to $9,929,201 in 1978 from $9,163,474 in 1977, an 8% increase. Net income in 1978 was $240,380, up from a loss of $854,820 in 1977.

- In 1976 and 1977, CUC reported losses. These were attributed to:
    - Loss of revenues from a former subsidiary, CUC of Indiana, Inc.
    - Two consecutive years of before tax losses due to the substantial decrease in CUC's facilities management fees, a decrease in interest income, an increase in interest expenses, and a loss on the sale of CUC of Indiana, Inc.

FIVE YEAR FINANCIAL SUMMARY, CUC

ITEM \ FISCAL YEAR	1978	1977	1976	1975	1974
Revenues from sales and services	$9,929,201	$9,163,474	$9,180,014	$5,819,919	$4,368,729
Income (Loss) before taxes	260,380	(854,820)	(540,321)	658,605	755,298
Net Income (Loss)	240,380	(854,820)	(446,321)	480,016	705,846

- CUC has two operating divisions:
    - Product Marketing Division primarily markets computer hardware and software to the end users. This division accounts for approximately 54% of revenues and has approximately 150 banking customers and 250 agribusiness customers. The division has been profitable since 1976.

May 1979

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- Utility Division provides remote computing services and accounts for 46% of revenues. It has approximately 300 customers.
  - The Utility Division was formed in late 1975 when CUC acquired substantially all of the assets of a computer services division of the Singer Company, located in Sunnyvale, California.
  - The Utility Division, formerly called Data Center Operations, reported losses in 1976 and 1977. Profits improved in 1978 due to a revenue increase of 6% and a 19% decrease in operating expenses because of the consolidation of a former Greyhound Computer Data Center in San Francisco into the Sunnyvale center.

- The contribution of each operating division to total company revenues follows:

FIVE YEAR SUMMARY OF GROSS REVENUES AND INCOME (LOSS)
BEFORE TAXES AND EXTRAORDINARY CREDIT FROM
CUC OPERATING DIVISIONS

FISCAL YEAR ITEM	1978	1977	1976	1975	1974
Product Marketing					
Division Revenues	$5,423,644	$4,541,000	$3,568,000	$2,767,000	$ 831,000
IBT* (Est.)	190,000	91,000	152,000	(34,000)	(149,000)
Utility Division					
Revenues	4,471,997	4,219,000	3,785,000	-	-
IBT* (Est.)	151,000	(926,000)	(968,000)	-	-
Facilities Management					
Fees Revenues	-	363,000	1,618,000	2,556,000	3,000,000
IBT* (Est.)	-	(20,000)	279,000	726,000	905,000
Systems Design & Programming					
Revenues	-	41,000	112,000	168,000	200,000
IBT* (Est.)	-	-	(4,000)	(34,000)	(1,000)

*Income Before Taxes

- Marketing efforts are directed at the top 50 banks and large feed mills and feed lots. Management considers IBM its major competitor to the Product Marketing Division. Tymshare, NCSS, Boeing Computer Services, Optimum Systems, Inc. and MCAUTO are the major competitors of the Utility Division.

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KEY PRODUCTS AND SERVICES

- CUC's Product Marketing Division targets the banking and agriculture industries with customized turnkey systems.

- Systems offered the banking industry combine a Qantel minicomputer with CUC's operating system.

  - Applications available include:
    - Collections.
    - Domestic funds transfer.
    - International payments.
    - Letter of credit.
    - Money desk.
  - All turnkey systems are purchased. The letter of credit system costs approximately $70,000. Other systems range in price from $60,000 to $150,000, depending on customization required.

- Systems offered the agriculture industry combine the DEC PDP-11 with CUC's operating system.

  - Applications are:
    - Grain accounting.
    - Least cost feed formulation.
    - Economic model for feed lots.
  - The price range for the agribusiness systems is $80,000 to $120,000, depending on individual customization.

- Qantel and DEC provide maintenance for the minicomputers used in the turnkey systems.

- The Utility Division provides both interactive and remote batch computing to its 300 customers. The division does not offer any specialized application software on the network.

INDUSTRY MARKETS While the agriculture and banking industries are the prime users of CUC's turnkey systems, the Utility Division provides processing for clients from diverse industries.

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GEOGRAPHIC MARKETS

- CUC markets it products throughout the United States with emphasis in agricultural states and large cities. The Utility Division primarily provides processing for clients in the San Francisco Bay Area.

- Branch offices are located in:

    - Atlanta.
    - Chicago.
    - Clifton, New Jersey.
    - Los Angeles.
    - New York.
    - Newport Beach.
    - San Francisco.
    - Sunnyvale Data Center, California.

COMPUTER HARDWARE AND SOFTWARE One Amdahl 470/V6 MVT.

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